

What Is Claimed Is:

1. A sheathed-element glow plug for a self-igniting internal combustion engine, having a heating element projecting into a combustion chamber of the internal combustion engine, having a current feed-through (10) by which a heating current for the heating element is fed through an opening in the combustion chamber, wherein a switch is positioned in the region of the current feed-through (10); and the heating current may be controlled by opening and closing of the switch.
2. The sheathed-element glow plug as recited in Claim 1, wherein a control circuit (73) for the switch is positioned in the region of the current feed-through (10); and a signal may be produced by the control circuit (73) for opening and closing the switch.
3. The sheathed-element glow plug as recited in Claim 2, wherein two feed lines (19) are provided, a first supply line (19) may be connected to a terminal for a supply voltage for the heating current; and a second line (19) is connected to the control circuit (73); and a control signal may be applied to the control circuit (73) via the second line (19).
4. The control circuit as recited in Claim 2, wherein an input for a line (19) is provided; the input is connected to the switch (70) and the control circuit (73); an operating voltage and simultaneously a control signal for the control circuit (73) may be applied via the input.
5. The sheathed-element glow plug as recited in Claims 2 through 4,

wherein the control circuit (73) includes a means for determining the temperature of the heating element; and the heating current is controlled as a function of the signal from these means.

6. The sheathed-element glow plug as recited in one of the preceding claims, wherein the heating element is designed as a metallic or ceramic glow element (11).
7. The sheathed-element glow plug as recited in Claim 6, wherein the glow element (11) may be fastened in the opening of the combustion chamber by the use of a housing (10); and the housing (10) simultaneously represents a housing for the switch (70) and the control unit (73).
8. The sheathed-element glow plug as recited in Claim 7, wherein the switch (70) and the control circuit (73) are integrated on one chip.
9. The sheathed-element glow plug as recited in Claim 8, wherein the chip is applied in the housing (10) without packaging.

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